UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.   : 7,171,385 B1
APPLICATION NO. : 09/718500
DATED   : January 30, 2007
INVENTOR(S)   : Ron S. Dembo and Helmut Mausser

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Column 6, lines 35, 52, and 59 replace: "MtP" with --MtF--

In Column 11, line 29 replace: "MtP" with --MtF--

In Column 11, line 31 replace: "portfolio Liquidity" with --portfolio. Liquidity--

In Column 12, line 4 replace: "qi,qi" with --q_l, q_l--

In Column 13, line 10 replace: "$(x_a-x_b) \le x_1 0$" with --$(x_a-x_b) \le x_1 \le 0$--

In Column 13, line 32 replace: "x_{i+j}" with --x_{i+1}--

In Column 13. line 49 replace: "$\text{maximize}_{(x, u, d)} \mathrm{P}^T u$" with --$\text{maximize}_{(x, u, d)} \mathrm{p}^T u$--

In Column 13, line 52 replace: "$u\text{-}d\text{-}(M\text{-}rq^{T)x=}0 \ (\pi)$" with --$u\text{-}d\text{-}(M\text{-}rq^T)x{=}0 \ (\pi)$--

In Column 13, line 53 replace: "$-x \le -x_L \ (\alpha_L)$" with -- $-x \le -x_L \ (\omega_L)$ --

In Column 13, line 54 replace: "$x \le x_U \ (\alpha_U)$" with --$x \le x_U \ (\omega_U)$--

In Column 16, line 41 replace: "$\text{minimize}_{(\mu,\pi,\alpha_L,\alpha_U)} k\mu - (x_L)^T \alpha_L + (x_U)^T \alpha_U$" with --$\text{minimize}_{(\mu,\pi,\omega_L,\omega_U)} k\mu - (x_L)^T \omega_L + (x_U)^T \omega_U$--

In Column 16, line 43 replace: "$\alpha_L . \alpha_U + (M^T - qr^T)\pi = 0$" with --$\omega_L \text{-} \omega_U + (M^T - qr^T)\pi = 0$--

In Column 16, line 44 replace: "$p\mu - \pi \le 0$" with -- $p\mu - \pi \ge 0$--

In Column 16, line 45 replace: "$\pi \le p$" with -- $\pi \ge p$--

In Column 16, line 46 replace: "$\mu, =_L /\alpha_U \le 0$" with -- $\mu, \omega_L, \omega_U \ge 0$--

In Column 16, line 49 replace: "$\lambda_j = p_j$" with --$\pi_j = p_j$--

In Column 17, line 10 replace; "$(\omega_L)_i - (\omega_U)_i + \sum_{i=1}^{s} (M_{ji} - q_i r_j)\pi_j = 0$" with

--$(\omega_L)_i - (\omega_U)_i + \sum_{j=1}^{s} (M_{ji} - q_i r_j)\pi_j = 0$--

In Column 17, line 39 replace: "$f = \sum_{i=1}^{s} \pi_j$" with --$f = \sum_{j=1}^{s} \pi_j$--

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In Column 17, line 45 replace: " $\dfrac{(\omega_L)_i}{f} - \dfrac{(\omega_U)_i}{f} + \sum_{i=1}^{s}(M_{ji} - q_i r_j)\rho_j = 0$ " with

-- $\dfrac{(\omega_L)_i}{f} - \dfrac{(\omega_U)_i}{f} + \sum_{j=1}^{s}(M_{ji} - q_i r_j)\rho_j = 0$ --

In Column 17, line 55 replace: " $E_P(V_{(i)}) = \sum_{i=1}^{s}(M_{ji} - q_i r_j)\rho_j$ " with

-- $E_P(V_{(i)}) \quad \sum_{j=1}^{s}(M_{ji} - q_i r_j)\rho_j$ --

In Column 19 line 15 replace: "over p" with --over ρ--

In Column 19, line 21 replace: "investor." with --investor).--

In Column 19, line 34 replace: " $r_\alpha \rho T u - r_\alpha \rho^T d = r_\alpha \rho^T (M - rq^T)x$ " with --$r_\alpha \rho^T u - r_\alpha \rho^T d = r_\alpha \rho^T (M - rq^T)x$--

In Column 19, line 38 replace: " $\pi^T (u - d - (M - rq^T x) = 0$ " with --$\pi^T (u - d - (M - rq^T x) = 0$--

In Column 19, line 39 replace: "replace $M_{(i)}$" with --$M_{(l)}$--

In Column 20, line 66 replace: "It can b shown" with --It can be shown--

In Column 21, line 17 replace: " $(M^T - qr^T)\pi + \omega_{U-\omega L} = 0$ " with --$(M^T - qr^T)\pi + \omega_U - \omega_L = 0$--

In Column 22, line 15 replace: "maximize $(x,u,d)p^T u$" with --maximize$_{(x,u,d)}p^T u$--

In Claim 13, line 51 replace: "maximize $(x,u,d)p^T d$" with --minimize$_{(x,u,d)}p^T d$--

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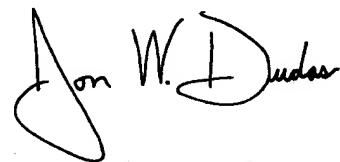INVENTOR(S) : Ron S. Dembo and Helmut Mausser

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Claim 13 line 53 replace: "$p^T d \leq k$" with --$p^T u \geq k$--

Signed and Sealed this

Twenty-second Day of May, 2007

JON W. DUDAS
Director of the United States Patent and Trademark Office